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PROJECT TEACHING: PUPILS PLANNING PRACTICAL ACTIVITIES. II¹

SAMUEL CHESTER PARKER
University of Chicago

III. HISTORY OF RECENT OPPORTUNITIES FOR PRACTICAL PLANNING BY PUPILS—*Continued*

B. DEVELOPMENT OF PROJECT TEACHING IN SPECIAL APPLICATIONS

Manual training. Early sloyd system of imitative practical exercises.—Perhaps the first school subject to be extensively modified in actual practice by the “new education” of 1900 (which we described in the preceding article) was manual training. In the earlier development of this subject in this country, the exercises in woodwork had frequently been patterned after those of the Swedish sloyd, a system which originated about 1875. It was introduced into Boston about 1886 and was soon widely adopted in American manual-training schools. Among the articles made by pupils in this system were such practical things as a blackboard pointer, a penholder, a chopping board, a flowerpot stand, a hatchet handle, a tool rack, a book stand, etc. These articles were made in regular order by each pupil largely in imitation of the demonstrations by the instructor. I had the good fortune, as a high-school boy, to enjoy two years (1894–96) of such formal carpentering, two hours a day, in a manual-training school in Cincinnati. I made certain practical articles which are still in daily use in my boyhood home. During this practice I developed skills which have frequently proved useful in later life.

Project-planning advocated about 1900.—There was, however, very little of the element of original planning by the pupils in the

¹ The first article defined project teaching as suggested in this title, gave recent examples to show how teachers and pupils attack a project, and traced the origin of the recent emphasis on practical planning to the “new education” of about 1880–1905 sponsored by Colonel Parker, Dewey, and others. Both articles will be reprinted under one cover. Reprints may be purchased after March 15, 1922, from the Department of Education, University of Chicago, for 25 cents each postpaid; in lots of 25 or more up to 100, 20 cents each; in lots of 100 or more, 15 cents each.

system of Swedish sloyd practical exercises. On this account, the exercises began to be strongly condemned by various leaders of the "new education" about 1900.

Dewey on the "psychology of occupations."—Probably the most significant theoretical expression of the views on which the criticisms of the sloyd were based was Dewey's article entitled "The Psychology of Occupations," in which he defines an occupation as "a mode of activity on the part of the child which reproduces, or runs parallel to, some form of work carried on in social life." In speaking of the methods to be used in teaching occupations, he says:

It is possible to carry on this type of work . . . so that the entire emphasis falls upon the manual or physical side. . . . This is the inevitable tendency wherever, in manual training for instance, the mastery of certain tools, or the production of certain objects, is made the primary end, and the child is not given, wherever possible, intellectual responsibility for selecting the materials and instruments that are most fit, and given an opportunity to think out his own model and plan of work, led to perceive his own errors, and find out how to correct them—that is, of course, within the range of his capacities.¹

In the further discussion Dewey emphasizes the desirability of more "personal experimenting, planning, and re-inventing" in pupils' manual activities.

Colonel Parker opposed "logical sequence."—Similar views were debated in the meetings of the manual-training teachers as reported in the early volumes of the *Manual Training Magazine* (1901-3). Colonel Parker was frequently a vigorous speaker at these meetings and advocated a change from the "logical sequence" of the sloyd exercises to activities involving more original thought by the pupils.

C. R. Richards on pupil-planning.—One of the most effective pleaders for more pupil-planning in manual training was Professor C. R. Richards, whose strategic position as head of the department of manual training at Teachers College, Columbia University, gave him wide influence. Richards talked fluently the language of the "new education," especially emphasizing "self-realization" and "education through expression." He used the term "project"

¹ *Elementary School Record*, I (April, 1900), 83. Reprinted in *The School and Society*, p. 132. Chicago: University of Chicago Press, 1915 (revised).

occasionally in his early papers to designate the pupil's exercises, and in his later papers (particularly in the *Teachers College Record*) he used it predominantly. His ideas concerning the place of pupil-initiative and pupil-planning are brought out in the following quotation from an article in the *Manual Training Magazine*:

To bring the element of self-expression into handwork does not mean that we are to turn the pupil loose to exercise whim and fancy unrestrained. In handwork, no more than in any other form of school work, should the pupil be free from suggestion and guidance by the teacher. . . . Self-expression does not mean that the pupil is expected to develop the entire plan and design for each thing done. This would be too much to expect from the unformed standards of judgments of young children, and could result only in crude projects and unsatisfactory work. But recognition of this element may mean that the general plan to attain an end will be developed from the pupils. It may mean the adjusting and modifying of details within this general plan by the individual pupil; and it may mean the working out of ways and means to achieve this plan. It may mean these or many other things, but it should always mean that the worker's own thought and feeling are contributing in a real fashion to the end for which he is working.¹

From sloyd to projects and then a compromise.—The change from the systematic formal exercises of the Swedish sloyd to project exercises in which pupils did considerable original planning had taken place in a number of woodworking courses throughout the country by 1910. For example, about that time a teacher of manual training in a large city said to me,

We have considerable project work now. Thus, if a boy says he wants to make a coaster wagon, we tell him he may do so if he can show us suitable plans. However, the difficulty is that soon all of the boys are making coasters just like the first one, and it becomes purely imitative work just as in the formal exercises.

Many experienced observers of these reformed project courses felt that less tool skill was acquired than in the more systematic courses. Consequently, there was a reaction and a tendency developed to provide for both systematic tool practice and project-planning in certain institutions.

Kindergarten. From formal constructions to pupil-planning and experimenting.—Closely related to the change in manual training under the influence of general Froebelian principles is the change in

¹ C. R. Richards, "Handwork in the Primary School," *Manual Training Magazine*, III (October, 1901), 3.

kindergartens from highly systematized formal constructions to activities in which pupil-planning plays a much larger part. Dewey's influence was a large factor in bringing about this change. His conception of the need for it and of its harmony with Froebel's principles is expressed in the following paragraph which continues the quotation concerning Froebel's principles in Dewey's Chicago school given in the preceding article:

This attempt, however, to assume what might be called the kindergarten attitude throughout the whole school makes necessary certain modifications of the work done in what is more technically known as the kindergarten period—that is, with the children between the ages of four and six. It is necessary only to state reasons for believing that in spite of the apparently radical character of some of them they are true to the spirit of Froebel.¹

The nature of the reformed kindergarten practice which Dewey helped to bring about is well illustrated in the following quotation from the 1917 course of study of the University of Chicago Elementary School.

A means of organization is through objective projects, resulting in tangible, relatively permanent play centers. These are the house itself with its kitchen as the central feature, the grocery store, and the garden or farm.

When the children first come to school, they find, among other attractive things, such toys as dolls, some doll furniture, kitchen utensils, and dishes. They play with these freely, as they do also with blocks, sand, and clay. The teacher may easily lead this play in the direction of cooking and serving plays. There soon begins to take form in one corner of the room, therefore, a miniature kitchen or dining-room. The teacher then produces a screen house with a door and windows, which serves to inclose this little room, which may now stay in place as long as it is wanted.

This playhouse now becomes the center of great interest and activity. Clay utensils and dishes are made, a cupboard to hold them is built of blocks, paper is cut for the shelves, paper doilies are cut and fringed, napkins are folded, and a meal is planned. A trip to the grocery is necessary to buy a cereal, which is then cooked and served by the children. This trip to the store suggests the building of a grocery store in the classroom. This now becomes the second problem or project. It calls for much planning and experimenting and results very naturally in group work, since the final product is a structure made of blocks and boards which is large enough for three or four children to play in at the same time. Another excursion is needed to get suggestions as to how to make shelves, the counter, and show windows, and to learn what a

¹ *Elementary School Record*, I (June, 1900), 144. *The School and Society*, p. 112. Chicago: University of Chicago Press, 1915 (revised).

grocery store really carries for sale. Numerous lesser problems present themselves for the children's solving: vegetables and fruits of clay must be shaped and colored accurately enough to be readily recognized, and baskets made to hold them; paper bags must be contrived; pictures must be made to show what canned goods are in stock; pocketbooks and money for the buyers must be provided and delivery wagons constructed. These are not made from patterns or models, but are worked out by the children and the results tested by actual use in playing in the grocery store. The teacher aims so to direct the handwork that the children will grow steadily in their power to solve simple problems and handle material skilfully.

The third project, the farm or garden, is subordinate to the other two, partly because it is less familiar, partly because it is taken up again in the first grade. The oldest children sometimes make a miniature farm in the sand table, showing the grain fields, vegetable garden, orchard, and the main buildings and animal inclosures and shelters.¹

A notable series of papers which express further the change in kindergartens from formal imitative exercises to projects permitting of greater pupil-planning was published in the *Teachers College Record* for January, 1914 (Vol. XV), under the editorship of Miss Patty Hill, one of the leaders of the progressive reform movements among American kindergartners.

Assembly programs.—A third phase of school work in which we early find project-planning by the pupils being introduced is in assembly programs. As occasions for formal recitations and singing, such programs have been common from early times. The change to pupil-project programs, however, in which the pupils plan and devise the program and its activities, represents a radical addition to the training provided by such occasions. One of the most highly developed centers for such training was the school of Colonel Parker; and, today, probably the best account of such practice is found in the *Second Yearbook* (1913) of the *Francis W. Parker School*.²

Construction and dramatization in history and geography.—The assembly programs which the pupils devised frequently contained the presentation before the audience of some construction project from history or geography as illustrated in the pictures in the preceding article. Often the program included the dramatization

¹ *Elementary School Journal*, XVII (February, 1917), 401-2.

² Chicago: Francis W. Parker School, 330 Webster Avenue. \$0.45.

of some phase of history or literature as illustrated in the examples described in Section II of the first article. Similar projects frequently furnished centers for much classroom work in the social studies as illustrated in the kindergarten example given above.

Civic campaigns.—With the appearance of Dunn's *The Community and the Citizen*¹ in 1909, the attention of many teachers of civics was called to the possibility of active, practical pupil-undertakings in the civic life of the school or the local community. Hence, "clean-up" campaigns and other useful drives began to be frequently planned and carried out by pupils under skilled teacher-direction.

Summary of special developments to this point.—Reviewing the special examples that we have given to illustrate the historical development of project methods, we see (1) that as early as 1900 there was a clear-cut agitation for the introduction of more practical planning by pupils in manual training and that the term "project" was early used by Richards to designate pupil-exercises in this subject; (2) that a revision of kindergarten practices along similar lines was agitated about the same time and was gradually effected in certain progressive schools; (3) that assembly programs (particularly in Colonel Parker's schools) early furnished practical occasions for pupil-planning; (4) that construction and dramatization projects soon appeared in history and geography; (5) and that Dunn's work in civics (1909) tended to introduce some project methods in that subject. It would be possible to determine the origin of similar influential starting-points for project teaching in science, English composition, and other subjects. Sufficient has been given, however, to illustrate the historical development of project methods in particular subjects. Hence, we shall give only one further example, namely, the development of project methods in high-school agriculture, a subject in which project teaching has secured a somewhat precise legal meaning through the influence of the Smith-Hughes law for aiding vocational education and its interpretation by the Federal Board for Vocational Education.

Home projects in agriculture. Illustrates our definitions.—The description of project teaching in agriculture will illustrate very

¹ A. W. Dunn, *The Community and the Citizen*. Boston: D. C. Heath & Co., 1909. Pp. x+266.

well some of the points of definition with which we opened our articles, namely, (1) that, according to the dictionary, "a project is something of a practical nature thrown out for the consideration of its being done" and that "to project" means "to contrive, to devise, to scheme"; (2) that a pupil-project is a unit of practical activity planned by the pupils (or pupil); and (3) that a pupil-project gives the pupils practice in practical planning and makes them responsible for devising ways and means and selecting and rejecting methods of achieving some definite practical end.

Transfer from technical social life to school described by the Federal Board for Vocational Education.—Furthermore, our description of project teaching in agriculture will show how the idea of projecting a practical plan was gradually taken over from the general social situation (where the term project was used with its ordinary dictionary connotation) into the supervised practical work in agriculture in high schools, where it retains a meaning very similar to its use in general practical affairs. These facts come out clearly in the following quotation from the pamphlet on "The Home Project as a Phase of Vocational Agricultural Education" issued in September, 1918, by the Federal Board for Vocational Education:

For many years the term "project" has been used [among scientific workers of the Department of Agriculture] to designate carefully planned investigations in agricultural science covering a considerable period of time, frequently demanding several years for their completion. Such plans, including aims and methods, have been submitted by the agricultural experiment stations of the several states and approved by the Office of Experiment Stations in the States Relations Service of the United States Department of Agriculture.

More recently the term "project" under practically the same conditions has been applied to the projects in demonstration work and extension teaching carried out under the Smith-Lever Act. The term carries with it the idea of a program of importance, of some duration, and an expectation of certain tangible and valuable results.

In connection with the teaching of agriculture in secondary schools the idea of projects *at home*¹ crystallized and took on the name of "home

¹ Examples of home projects are the following: growing an acre of corn, or cotton, or some other crop; raising chickens, or cows, or other animals; improving the dairy barn or other farm buildings; keeping records of a dairy herd to improve it, etc. The Federal Board says, "Encourage the student to choose a sufficiently ambitious project. If he is in earnest, he will prefer a man-sized task to a childish or miniature project. A high-school boy knows he is not doing much farming if he is caring for one pig or rearing six chicks or managing a very small garden" [p. 11].

project" about 1908 in Massachusetts, receiving the sanction of the State Board of Education under suitable legislation in 1911. This plan, with modifications which do not change the principal points of the definition, had been adopted in most of the states which had constructive legislation on agriculture in the secondary schools previous to the enactment of the Smith-Hughes Act. In its work on secondary and elementary school agriculture, the United States Department of Agriculture had previously accepted the prevailing conception of the home project, issuing several publications on this basis.

Since the Federal Board for Vocational Education intends to develop and extend this plan, it seems undesirable that the term "home project" should be applied to less important exercises.

It is desirable also that the term "class project" shall be applied only to rather ambitious, well-planned lines of work for which we might use the term "home project" if they were located at home.¹

Rules for administering home projects.—The bulletin from which this quotation is taken outlines in detail the conditions under which "home projects" must be conducted in order to be approved. A summary view of these conditions is given in the following quotation:

THE ESSENTIALS OF A HOME PROJECT

1. A carefully drawn plan covering a considerable extent of time, with a definite aim, including some problems² new to the pupil and outlining with sufficient detail the methods to be employed. This plan should be written and should be an exhibit in connection with the second essential.

2. An agreement between parent, pupil and teacher, based upon the plan already prepared and so prepared as to eliminate later disagreements. The boy's financial privileges should be clearly stated.

3. Instruction in the school both in regular course and in special individual study to the end that the project work may be done intelligently and that the home may furnish the kind of laboratory practice best adapted to the school work.

4. Detailed records of method, time, cost, income, and other important factors which shall finally be summarized in—

¹ "The Home Project as a Phase of Vocational Agricultural Education," pp. 7-81 *Agricultural Series No. 3, Bulletin 21*. Washington: Federal Board for Vocational Education, 1918.

² The problems which a student confronts in doing his planning are illustrated by the following from a poultry project: "1. Shall I purchase pure-bred fowls or must I take over the farm flock as a basis for improvement? 2. Shall I aim at producing eggs for market, meat for market, breeding stock and eggs, or some other end? 3. Shall I be obliged to construct new houses, to renovate and remodel old houses, or may I use good houses now on the farm? 4. Shall I plan to grow poultry feed as a correlated plant project?" [p. 11].

5. A report including both a story and a complete accounting for the entire project period.

6. Supervision by a competent instructor of such a nature as to help the student to succeed in his project, to encourage him at times when difficulties arise and to hold him to his agreement; incidentally to impart instruction supplementing that of the classroom.

The supervisor should demand records of the student and should in turn make reports to his supervising officer.¹

Conclusion of historical view.—The examples which we have presented of the introduction of project teaching in manual training, the kindergarten, assembly programs, history, geography, civics, and agriculture illustrate how the movement has affected actual school practice from 1900 to the present. They show how the “new education” which was stimulated by the broader Froebelian teaching and which was propagated by Teachers College, Colonel Parker, and Professor Dewey, has gradually secured vigorous recognition in the actual project practice in many American schools.

IV. VALUES OF PRACTICE IN PLANNING PRACTICAL ACTIVITIES

Develops skill in practical planning.—The most obvious values of such project teaching as we have described are clearly implied in the fact that skill in the planning of practical activities is very necessary and useful in the world at large. Successful inventors, designers, architects, engineers, organizers, managing editors, dramatic producers, practical promoters, executives, farmers, housekeepers, etc., all have to have skill in planning practical activities. Project teaching anticipates this need by giving pupils practice in such practical planning in the ordinary school, instead of leaving it all to the “hard school of practical experience” after graduation.

Appeals to practical and executive instincts.—In addition to the obvious direct educational value of such practice in practical planning, project teaching has the additional value of securing the pupils’ attention through appeals to certain practical and executive instinctive interests, such as the instinctive interests in construction, problem-solving, communication, the management of people, etc.

¹ *Ibid.*, p. 9.

Such appeals, however, are not peculiar to project teaching since many other types of school activities may appeal to these same interests.

V. LIMITED SPHERE OF PROJECT TEACHING

Not the sole type of valuable activity and learning.—As we have defined project teaching, it is only one type of procedure needed in pupil training, not the sole type. There is much valuable activity and learning in social life (including the school) that does not consist of planning practical activities. In fact, a large part of the work and learning of artisans, clerks, bookkeepers, librarians, teachers, farmers, housekeepers, even executives and scientists, consists in the routine juggling of mental and material products. Hence we have a large place in the school for the learning of organized facts from textbooks and for drill in acquiring routine skills. It is quite significant that while the enthusiasm for project teaching is sweeping the country, at the same time the scientific investigators of methods of teaching reading, spelling, handwriting, and arithmetic are placing special emphasis upon the scientific diagnosis of each pupil's needs in each skill and the prescription by the teacher of specific practice exercises suited to each pupil's peculiar needs and deficiencies.

One of the social objectives and one of the modes of learning.—By conceiving project teaching as the planning by pupils of practical activities, we thus avoid the danger of overemphasizing it to the exclusion of other social objectives and other modes of learning. Skill in planning practical activities thus becomes one among many co-ordinate objectives of the school; and practice in such planning becomes one among several forms of learning.

VI. TECHNIQUE IN PROJECT TEACHING

Teacher needs wide knowledge, executive ability, and skill in directing problem-solving.—The successful direction of the practical planning of pupils calls for greater knowledge and skill on the part of the teacher than most other forms of teaching. (1) The *wide knowledge* needed is illustrated by some absurd mistakes in matters of scientific and historical fact which I have observed in the project teaching of even highly skilled, experienced teachers. These

mistakes arose from the fact that the solution of the practical project problems with which the pupils were concerned carried the class into scientific and historical fields where the teacher was not well informed. (2) In managing *group* projects, the teacher commonly needs skill in organizing and directing subdivided labor. She needs to be able to direct the organization of committees and to keep track of the varied activities of individuals who have been assigned special phases of the project. Thus, project teaching requires greater *executive ability* in the teacher than textbook recitations or routinized drill. (3) Finally, the teacher needs skill in guiding pupils in *problematic thinking*. Such skill is discussed at length in the chapter on "Problem Solving" in the author's *Types of Elementary Teaching and Learning*.¹ As brought out there, we find that the successful direction of problem-solving involves on the part of the teacher skill in getting the pupils to do each of the following: (1) To define the problem clearly; (2) To keep the problem in mind; (3) To make a variety of suggestions; (4) To criticize and evaluate each suggestion; (5) To organize the thinking systematically and to summarize from time to time its net outcomes.

VII. CONCLUSIONS

Regrettable absence of precise knowledge concerning practical planning.—It is to be regretted that we cannot give a more precise scientific discussion of giving pupils practice in practical planning than we have done. Unfortunately, we have little quantitative evidence to indicate how large a part practical planning plays in the lives of typical individuals as contrasted with the part played by the routine juggling of mental and material products or with mere leisurely rumination and enjoyment. Furthermore, we have little quantitative evidence to indicate the possibilities of improving pupils of various mental endowments in their ability to carry on practical planning; the best devices to use; and the cost and value to society of the improvements effected. About all we know is that practical planning or projecting does play an important part in the world's activities and that some schools are giving pupils practice in it along the lines described.

¹ Boston: Ginn & Co. (in press).

Contrast precise objective investigations in handwriting, etc.—In contrast with this confused condition we may note the illuminating progress that has been made by mathematically precise investigations of the social objectives and of the best methods in teaching handwriting, spelling, and beginning reading. Here the “newer education” of 1910–20, using exact statistical and experimental methods, has determined, for example, that quality 60 on the Ayres handwriting scale is all that is needed for ordinary business purposes; that in much skilled handwriting the letters are formed predominantly with the fingers; that some 3,000 common words are all a pupil needs to know how to spell for ordinary social purposes; that fifteen minutes a day of specific snappy drill is all that is needed in either handwriting or spelling in order to attain these objectives; that pupils who have not had good specific training in phonetics are likely to be inferior in accurate reading; and dozens of other reliable conclusions, such as are summarized in the *Eighteenth Yearbook of the National Society for the Study of Education, Part II*.¹

Problems needing investigation: social frequency, mental abilities, cost, etc.—Obviously, similar precise knowledge should be obtained concerning the social needs and standards and the best methods for giving pupils practice in practical planning. Such knowledge can come only from precise statistical and laboratory studies which would reveal such items as the following:

1. What persons in various occupations are primarily routine workers and what ones are primarily responsible for practical planning? Many subordinate problems come under this, such as the amount of routine work required of the thoughtful manager of enterprises; the number of occasions for practical planning that occur in the work of the routine bill clerk, sales clerk, lathe operator, etc.

2. What degrees of skill in practical planning can be acquired by persons of various degrees of mental ability (imbeciles, morons, and backward, average, and superior persons) from various amounts

¹ “Fourth Report of the Committee on Economy of Time in Education,” *Eighteenth Yearbook of the National Society for the Study of Education, Part II*. Bloomington, Illinois: Public School Publishing Co., 1919.

of instruction? For example, Goddard states that a certain grade of feeble-minded person can learn to use machinery and care for animals but cannot plan.

3. What are the specific elements of skill in practical planning and how can these elements of skill be best practiced?

4. How can we measure the initial ability of each pupil in practical planning (i.e., before instruction) and the amount of improvement effected by the practice provided?

5. What is the cost to society of the improvements achieved with each grade of mental ability and the consequent desirability of continuing or discontinuing the training?

6. How much technical knowledge and skill should be given pupils before they are given practice in practical planning in each particular subject or vocation? Here, for example, profitable investigations could be conducted in successful schools for training architects, since the work of the latter involves so much planning and designing and also so much technical skill and precise technical information.

Inspiration from a great city planner.—It is likely that while the results of such investigations would lead to some skepticism concerning the value of practice in practical planning for students of low intellectual endowment, they would also greatly enhance our estimation of the value of such practice and training in the case of students possessing considerable natural talent for the original designing of practical enterprises. For the latter, we may well set up such educational objectives as we see realized in the achievements of great practical planners like Daniel Hudson Burnham, architect and planner of cities, who dominated the plans for the Chicago World's Fair, designed the first skyscraper of Chicago, the Flatiron Building of New York, and the famous city plans of many great cities, including the ambitious and beautiful project for the city plan of Chicago.

In Burnham's own words, we may find the large social value of skilled planning suggested in the following quotation of his motto for city planners:

Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work,

remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever-growing insistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty.

Note on the "new education."—Further light on the Froebelian element in the "new education" is shed by the statement that W. N. Hailman, a noted Froebelian, conducted a magazine, entitled the *New Education*, in Milwaukee, for six years beginning in 1876. Its editor said that Froebel and Herbert Spencer were the principal exponents of the "new education," and that the journal was established to aid in the propagation of the views of Froebel and Spencer, particularly of the former. For further details see N. C. Vandewalker, *The Kindergarten in American Education*. New York: Macmillan Co., 1908. Pp. 32-33.

Practical publications.—For teachers who desire a variety of practical suggestions for the actual organization of projects, the following publications are suggested:

"Second Report of the Committee on New Materials of Instruction," *Twentieth Yearbook of the National Society for the Study of Education, Part I*. Bloomington, Illinois: Public School Publishing Co., 1921. \$1.30. Over two hundred examples briefly described, from the kindergarten through the junior high school.

Yearbooks and studies in education of the Francis W. Parker School. Chicago: Francis W. Parker School, 330 Webster Avenue. \$0.45 per volume. While each volume contains specific accounts of projects, Volume II (1913) on "The Morning Exercise" and Volume V (1918) on "The Course in Science" are particularly full of concrete descriptions of the actual organizing of projects.